

Measuring Teachers' Readiness to Use Technology: Pedagogical and Content Knowledge (TPACK) pilot study

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Abstract - Accepted as an integral part of education, technology in teaching and learning can enhance practice not only in the traditional class but also beyond it. Schooling can now be extended to learning beyond the four enclosed walls of the classroom into the almost limitless possibility of education across time and space accessible via the domain of cyber technology. The significant contribution of technology to education has prompted educational bodies like the Malaysian Ministry of Education to prominently point out that online learning becomes the main pedagogical approach in higher learning institutions in the nation's educational blueprint. The powerful potential of technology however, can only be realised through informed and purposeful use of it by teachers. Integrating technology in the language classroom requires that teachers not only have knowledge about the Technology but interplay between three components of knowledge – Technology, Pedagogy, and Content Knowledge (TPACK) which determines the essential qualities of teacher knowledge that are required when teachers employ technology in their teaching. The main study is therefore designed to measure teachers' readiness to use technology in teaching English language in tertiary level classrooms to enhance student learning. To serve this purpose, a pilot study was carried out on 20 English language instructors to evaluate the reliability and the validity of a questionnaire that was adapted to gauge instructors' readiness in carrying out technology-mediated classrooms at a public university in Malaysia. Correlations among items in the current study reveals lower coefficients compared to a previous study on the same instrument probably due to the smaller sample size in the current study but the relationships are mostly positive which still suggests convergence validity. The internal consistency of the items was mostly better than two previous similar studies. Five items that seemed to be misbehaving in their respective measures were chosen based on their inter-item correlation and the item-total statistics and scrutinized via cognitive interviews with selected respondents to gain insights into the items but the results of the interviews revealed that the items are functioning as intended.

Keywords: Technology, pedagogy, content knowledge, teacher knowledge, higher education.

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1 Introduction

In the digital age that the world is currently experiencing, technology permeates almost every aspect of day to day life so much so that any event not touched by technology is a rarity. Proven in many situations as an integral part of education, an educator must get to grips with the impact of technology or lack thereof. If this is so, to what extent technology is used effectively and how well it is being used in the classroom are crucial issues to consider ensuring that learners do not miss out on any benefits that may come with technology-mediated classrooms.

The main aim of this research is to adapt and validate the TPACK instrument for higher education language teachers. A widely-used instrument on technology integration in the classroom was adapted and adopted for use to suit the context of the study.

The paper begins with the introduction to the topic and main aim of the study in Section 1 followed by the background to the study in Section 2. Section 3 spells out the problem statement and the research questions. Section 4 follows by discussing the methodology and the instrumentation. Results and findings are described in